DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-021680 Address: 333 Burma Road **Date Inspected:** 07-Mar-2011

City: Oakland, CA 94607

Project Name: SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: CWI Present: Yes An Qing Xiang. No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes N/A **Delayed / Cancelled:** No

Bridge No: 34-0006 **Component:** OBG components.

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance Inspector (QA) Mr. Shailesh Wadkar was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA Inspector observed and/or found the following:

Bay 14:

This QA Inspector observed the following work in progress:

OBG Seg 13AW:

The Flux Cored Arc Welding (FCAW) process on weld joint nos: Seg3013B-263 [Vertical Plate (VP) 3010A to Floor Beam (FB) 3199A, complete joint penetration (CJP) weld at panel point (PP) 120]. The welder is identified as 045143 and was observed welding in 1G position. ZPMC Quality Control (QC) was identified as Liu Feng. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): B-T-2231-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: Seg3013AH-176 [X3863G to K-Plate (KP) 3010A, CJP weld at PP118.35]. The welder is identified as 066361 and was observed welding in 4G position. ZPMC QC was identified as Liu Feng. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-TC-U4b-FCM-1.

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The Submerged Arc Welding (SAW) process on weld joint no: Seg3013-012 [Deck Panel (DP) 3116A to DP 3117A, CJP weld]. The welder is identified as 045265 and was observed welding in 1G position. ZPMC QC was identified as Liu Feng. The welding variables recorded by this QC appeared to comply with WPS: B-T-223(2)1T-ESAB-1.

The SMAW process on weld joint no: Seg3013P-042 [X4369B to Edge Plate (EP) 3023A, CJP weld at PP118]. The welder is identified as 066734 and was observed welding in 3G position. ZPMC QC was identified as Liu Feng. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

OBG Seg 14W:

The SMAW process on weld joint no: Seg3020R-020 (X4859G to FB3321A, CJP weld at PP126). The welder is identified as 051348 and was observed welding in 4G position. ZPMC QC was identified as Sun Tian Liang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-U3b.

This QA Inspector observed ZPMC personnel performing heat straightening on Sub Assembly Vertical Shear Plate (VSP). Heat straightening was done as per heat straightening report (HSR): 10156. See attached photo for further information.

OBG Seg 13AW:

This QA Inspector verified the root gap between the I-rib stiffeners of Deck Panel (DP) 3116 and Floor Beam at the respective panel points (Cross Beam side). As per drawing, I-ribs of this Deck Panel are to be fillet welded with Floor Beam. However, for some of the welds, root gap was observed to be in excess of 5mm and needs to be welded as CJP welds as per Submittal ABF-SUB-00200R02 "Methods to Repair Elements that Exceed Specified Tolerance" Repair method as outlined in 6.2. This Repair method was approved as outlined in State Letter 05.03. 01-003474 dated July 01 2009. Weld nos are as mentioned below.

- 1) At PP117.5 Seg 3013S-018, 020, 145.
- 2) At PP118.35 Seg 3013N-025, 027, 031 and 033.
- 3) At PP119-1500 Seg 3013L-032, 034, 038 and 040.
- 4) At PP119 Seg 3013J-022.
- 5) At PP119+1500 Seg 3013G-028, 030, 034 and 036.
- 6) At PP119.65 Seg 3013E-290 and 286.
- 7) At PP120 Seg 3013C-143, 145, 147 and 149.

The above mentioned weld nos are also informed to ZPMC QC / CWI; An Qing Xiang.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable Contract documents.

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Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang; phone: 15000422372., who represents the Office of Structural Materials for your project.

Inspected By:	Wadkar,Sailesh	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer